

## Injury among Residents of Coconino County, Arizona 2005

Injury is a public health problem that impacts the lives of thousands of Arizona residents each year. Chronic pain, disability, large medical bills, changes in quality of life, and premature death are just some of the possible effects of injuries. These effects can extend beyond injured individuals to their families and communities. With non-fatal injuries, family members are often required to provide care, which can result in time away from work, loss of income, and increases in stress within the family. At the community level, the financial burden of injuries can include medical expenses, rehabilitation, lost wages, and lost productivity. Most injuries are predictable and preventable. Understanding the causes of injury is an important step toward reducing injury-related morbidity and mortality.

The following report identifies the leading causes of injury among residents of Coconino County in 2005. This report is intended to be used as a guide for strategy development, program implementation, and evaluation. The Arizona Department of Health Services Injury Prevention Program operates under the vision of reducing injuries in Arizona using integrated surveillance and evidence-based interventions. This report was generated to increase awareness of county-specific injury issues and to facilitate opportunities for effective injury prevention activities.

**Figure 1. Injury Pyramid for Coconino County Residents, Arizona 2005**

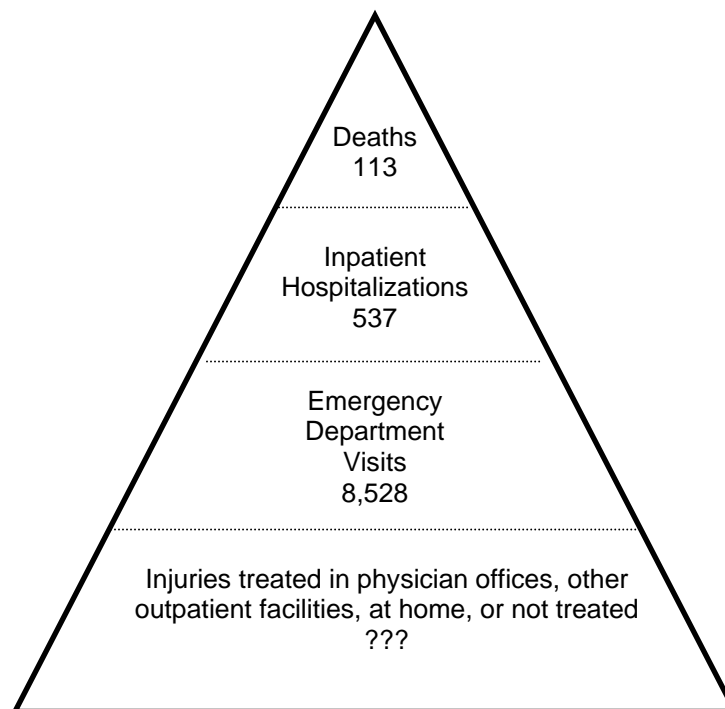


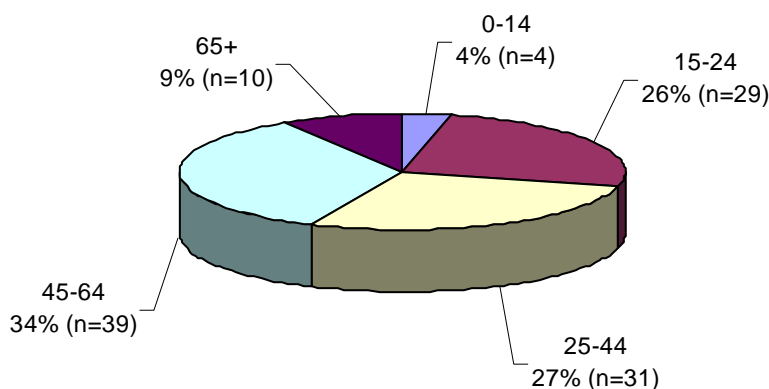
Figure 1 shows an injury pyramid for residents of Coconino County during 2005. This pyramid shows that deaths represent the smallest proportion of injuries. The proportions increase towards the foundation of the pyramid, which is comprised of

hospital discharges, emergency department visits, and self care. Although injuries that do not require medical treatment may be the most numerous, no existing datasets capture these types of injuries.

## Deaths

In 2005, there were 113 injury-related deaths in Coconino County. Most of these deaths were among males (68 percent, n=77), and females accounted for 32 percent (n=36). The largest percentage of deaths was among individuals ages 45 to 64 years (34 percent, n=39). Age distributions are shown in Figure 2.

**Figure 2. Injury-Related Deaths by Age Group, Coconino County, Arizona 2005 (n=113)**

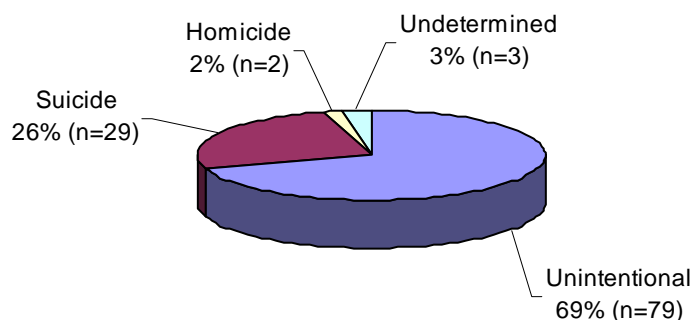


Non-Hispanic Whites accounted for the largest percentage of injury-related deaths in Coconino County (49 percent, n=55), followed by American Indians (41 percent, n=46). Rates by racial/ethnic groups could not be calculated due to small sample sizes.

For the state of Arizona, unintentional injury is the leading cause of death among all residents ages 1 to 44 years. However, for residents of Coconino County, unintentional injury is the leading cause of death for individuals ages 15 to 44 years.<sup>1</sup> Sixty-nine percent of injury-related deaths in Coconino County were due to unintentional injuries (n=79); 26 percent were suicides (n=29); 2 percent were homicides (n=2); and 3 percent were of undetermined intent (n=3). Figure 3 shows injury-related deaths by intent.

<sup>1</sup> Arizona Health Status and Vital Statistics 2005.

**Figure 3. Injury-Related Deaths by Intent, Coconino County, Arizona 2005 (n=113)**



### *Coconino County Injury-Related Deaths Compared to Other Arizona Counties*

Table 1 shows the intent of injury-related deaths for residents of Coconino County compared to residents of the rest of Arizona. The leading intent of injury-related deaths was unintentional for both Coconino County and the remaining counties, accounting for the majority of injury-related deaths. Coconino County had a larger percentage of suicides (26 percent) than the remainder of Arizona (20 percent). Coconino County had a smaller percentage of homicides (2 percent) than the remaining counties (11 percent).

<b>Table 1. Intent of Injury-Related Deaths, Coconino County Compared to Other Arizona Counties, 2005</b>			
Coconino County (n=113)		Arizona, excluding Coconino County (n=4,477)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	69	Unintentional	65
Suicide	26	Suicide	20
Homicide	2	Homicide	11
Undetermined	3	Undetermined	4

### *Suicide*

Males accounted for the majority of suicides in Coconino County (72 percent, n=21), while females accounted for 28 percent (n=8). Twenty-four percent of suicides were among individuals ages 10 to 24 years (n=7); 35 percent were among individuals ages 25 to 44 years (n=10); and 41 percent were among individuals ages 45 to 64 years (n=12). The most common cause of suicide was firearms (55 percent, n=16).

### *Unintentional Injury*

The most common cause of unintentional injury-related deaths in Coconino County was motor vehicle traffic crashes (53 percent, n=42). Sixteen percent of unintentional injury deaths had other/unspecified causes (n=13). The causes of unintentional injury-related deaths during 2005 in Coconino County are shown in Table 2.

<b>Table 2. Causes of Unintentional Injury-Related Deaths among Coconino County Residents, Arizona 2005</b>		
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Motor vehicle traffic	42	53%
Other/unspecified	13	16%
Fall	10	13%
Poisoning	7	9%
Nature/environment	7	9%
<b>Total</b>	<b>79</b>	<b>100%</b>

### Motor vehicle traffic crashes

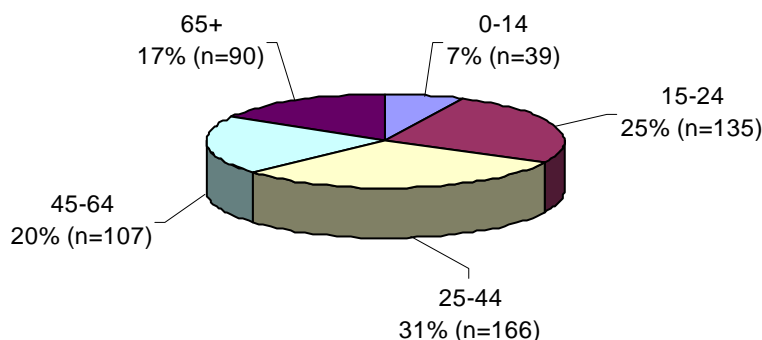
Males accounted for 67 percent of unintentional motor vehicle traffic-related deaths (n=28) and females accounted for 33 percent (n=14). Forty-two percent of these deaths were among individuals ages 10 to 24 years (n=18); 29 percent were among individuals ages 25 to 44 years (n=12); and 29 percent were among individuals 45 to 64 years (n=12).

For most of the motor vehicle traffic-related deaths, the location of the injured person was not specified on the death certificate (57 percent, n=24). Ten deaths were of pedestrians (24 percent); six deaths were of motor vehicle occupants (14 percent); and two deaths were of pedal cyclists (5 percent).

### **Non-Fatal Inpatient Hospitalizations**

In 2005, there were 537 non-fatal inpatient hospitalizations due to injury among residents of Coconino County. Fifty-eight percent were male (n=314) and 42 percent were female (n=223). Thirty-one percent of the hospitalizations were among individuals ages 25 to 44 years (n=166). Figure 4 shows injury-related inpatient hospitalizations by age group among residents of Coconino County.

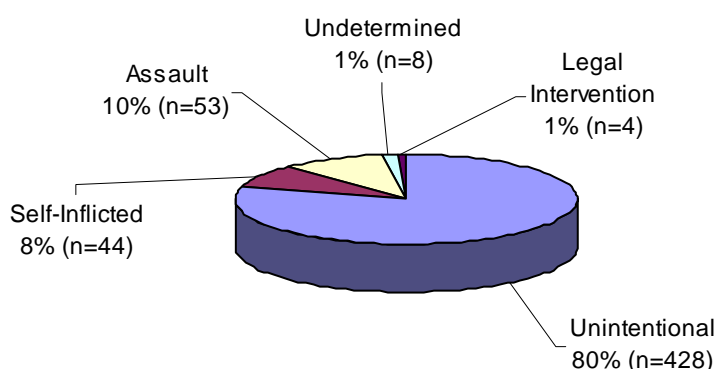
**Figure 4. Injury-Related Inpatient Hospitalizations by Age Group, Coconino County, Arizona 2005 (n=537)**



There were 300 injury-related hospitalizations among White, Non-Hispanic residents of Coconino County (56 percent). The second highest number was among American Indians (30 percent, n=159). Rates by racial/ethnic groups could not be calculated due to small sample sizes.

Eighty percent of the inpatient hospitalizations were due to unintentional injuries (n=428); 8 percent were due to self-inflicted injuries (n=44); 10 percent were due to assaults (n=53); and 1 percent were of undetermined intent (n=8). Four hospitalizations were due to legal intervention (1 percent). Figure 5 shows injury-related hospitalizations by intent.

**Figure 5. Injury-Related Inpatient Hospitalizations by Intent, Coconino County, Arizona 2005 (n=537)**



#### *Coconino County Injury-Related Hospitalizations Compared to Other Arizona Counties*

Table 3 shows the intent of injury-related hospitalizations for residents of Coconino County compared to residents of the rest of Arizona. The leading intent of injury-related hospitalizations was unintentional for both Coconino County and the remaining counties, accounting for the majority of injury-related hospitalizations. Overall, Coconino County and the rest of Arizona had similar percentages of hospitalizations due to self-inflicted injuries and assaults.

<b>Table 3. Intent of Injury-Related Inpatient Hospitalizations, Coconino County Compared to Other Arizona Counties, 2005</b>			
Coconino County (n=537)		Arizona, excluding Coconino County (n=34,487)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	80	Unintentional	84
Self-Inflicted	8	Self-Inflicted	8
Assault	10	Assault	6
Undetermined	1	Undetermined	2

The most common causes of unintentional inpatient hospitalizations in Coconino County were falls (32 percent, n=135) and motor vehicle traffic crashes (28 percent, n=119). Table 4 shows the causes of unintentional injury-related hospitalizations among residents of Coconino County.

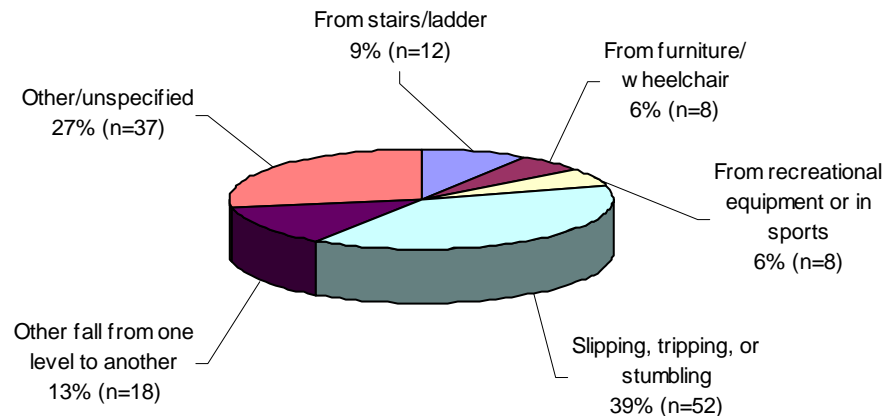
<b>Table 4. Causes of Unintentional Injury-Related Inpatient Hospitalizations among Coconino County Residents, Arizona 2005</b>		
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Fall	135	32%
Motor vehicle traffic	119	28%
Other/unspecified	92	22%
Motor vehicle non-traffic	20	5%
Poisoning	18	4%
Struck by/against	17	3%
Transport	14	3%
Cut/pierce	13	3%
<b>Total</b>	<b>428</b>	<b>100%</b>

## Falls

Males accounted for 43 percent of unintentional fall-related hospitalizations (n=58) and females accounted for 57 percent (n=77). Seven percent of fall-related hospitalizations were among children 14 years and under (n=10); 10 percent were among individuals ages 15 to 24 years (n=13); 36 percent were among individuals ages 25 to 64 years (n=49); and 47 percent were among individuals 65 years and older (n=63).

Among the hospitalizations for unintentional falls, 39 percent were due to slipping, tripping, or stumbling (n=52). Figure 6 shows unintentional fall-related hospitalizations by contributing event.

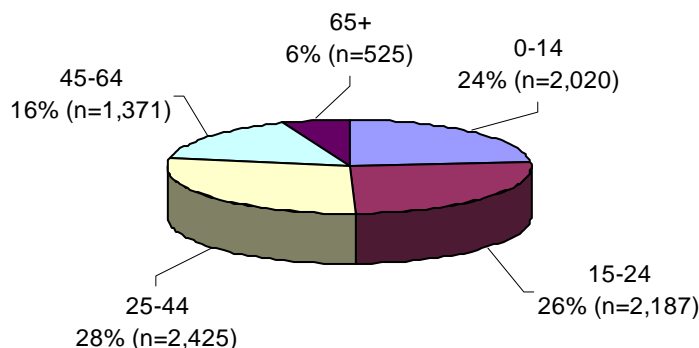
**Figure 6. Inpatient Hospitalizations due to Unintentional Falls by Contributing Event, Coconino County, Arizona 2005 (n=135)**



## Non-Fatal Emergency Department Visits

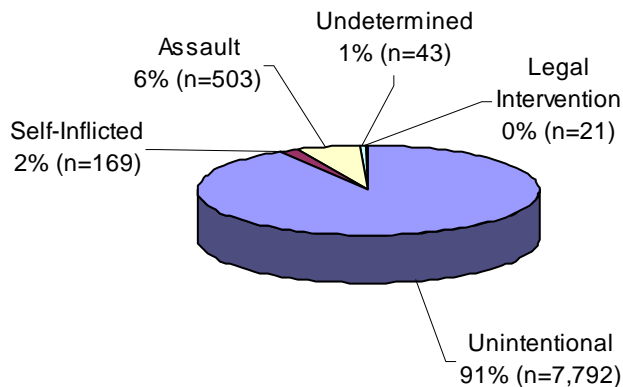
In 2005, there were 8,528 injury-related emergency department visits among residents of Coconino County. Males accounted for 56 percent of these visits (n=4,791) and females accounted for 44 percent (n=3,737). The largest percentage of visits was among individuals ages 25 to 44 years (28 percent, n=2,425). Figure 7 shows injury-related emergency department visits by age group.

**Figure 7. Injury-Related Emergency Department Visits by Age Group, Coconino County, Arizona 2005 (n=8,528)**



Ninety-one percent of the emergency department visits were due to unintentional injuries (n=7,792); 6 percent were due to assaults (n=503); 2 percent were due to self-inflicted injuries (n=169); and 1 percent were of undetermined intent (n=43). There were 21 emergency department visits due to legal intervention. Figure 8 shows emergency department visits by intent.

**Figure 8. Injury-Related Emergency Department Visits by Intent, Coconino County, Arizona 2005 (n=8,528)**



## *Coconino County Injury-Related Emergency Department Visits Compared to Other Arizona Counties*

Table 5 shows the intent of injury-related emergency department visits for residents of Coconino County compared to residents of the rest of Arizona. The leading intent of injury-related visits was unintentional for both Coconino County and the remaining counties, accounting for the majority of injury-related visits. Overall, Coconino County and the rest of Arizona had similar percentages of visits due to self-inflicted injuries and assaults.

<b>Table 5. Intent of Injury-Related Emergency Department Visits, Coconino County Compared to Other Arizona Counties, 2005</b>			
Coconino County (n=8,528)		Arizona, excluding Coconino County (n=370,143)	
<u>Intent</u>	<u>Percent of Total</u>	<u>Intent</u>	<u>Percent of Total</u>
Unintentional	91	Unintentional	94
Self-Inflicted	2	Self-Inflicted	1
Assault	6	Assault	4
Undetermined	1	Undetermined	1

The most common cause of unintentional injury-related emergency department visits in Coconino County was falls (27 percent, n=2,131). Table 6 shows the causes of unintentional injury-related emergency department visits for Coconino County residents in 2005.

<b>Table 6. Causes of Unintentional Injury-Related Emergency Department Visits among Coconino County Residents, Arizona 2005</b>		
<b>Cause</b>	<b>Number</b>	<b>Percent</b>
Fall	2,131	27%
Other/unspecified	1,620	21%
Struck by/against	1,143	15%
Overexertion	940	12%
Motor vehicle traffic	898	11%
Cut/pierce	775	10%
Nature/environment	285	4%
<b>Total</b>	<b>7,792</b>	<b>100%</b>

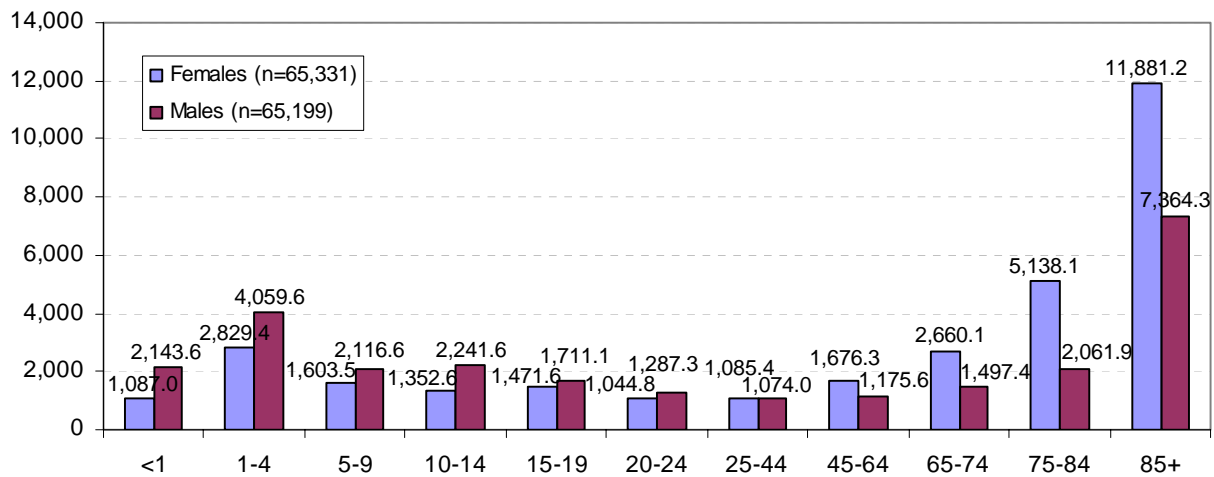
### Falls

There were 2,131 emergency department visits due to unintentional falls. Males accounted for 49 percent of these visits (n=1,053) and females accounted for 51 percent (n=1,078). Individuals ages 25 to 64 years had the highest percentage of unintentional fall-related emergency department visits (38 percent, n=798). Thirty-two percent of visits were among children 14 years and under (n=689); 16 percent were among individuals ages 15 to 24 years (n=344); and 14 percent were among individuals 65 years and older (n=300).



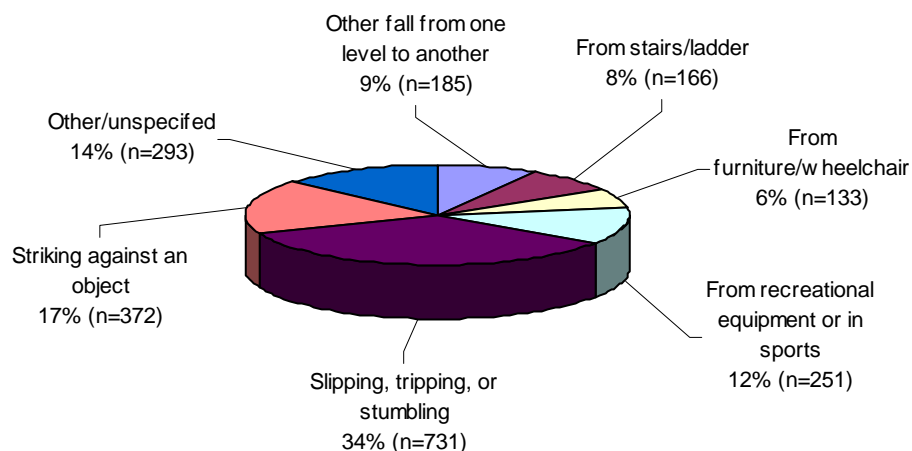
The highest rates of unintentional fall-related emergency department visits were among older adults. Females 85 years and older had a rate of 11,881.2 fall-related emergency department visits per 100,000 residents. Figure 9 shows emergency department visit rates of unintentional falls by age group and gender.

**Figure 9. Unintentional Fall-Related Emergency Department Visit Rates per 100,000, Coconino County, Arizona 2005 (n=2,131)**



Thirty-four percent of unintentional falls were due to slipping, tripping, or stumbling (n=731), and 17 percent resulted in striking against an object (n=372). Figure 10 shows emergency department visits due to unintentional falls by contributing event.

**Figure 10. Emergency Department Visits due to Unintentional Falls by Contributing Event, Coconino County, Arizona 2005 (n=2,131)**



## Summary

In 2005, there were 113 injury-related deaths in Coconino County, and the largest percentage of deaths was among individuals ages 45 to 64 years (34 percent, n=39). The majority of these deaths were due to unintentional injuries (69 percent, n=79). The most common cause of unintentional injury deaths was motor vehicle traffic crashes (53 percent, n=42). For residents of Coconino County, unintentional injury is the leading cause of death for individuals ages 15 to 44 years.<sup>1</sup> Twenty-six percent of injury-related deaths in Coconino County were suicides (n=29); 2 percent were homicides (n=2); and 3 percent were of undetermined intent (n=3).

There were 537 non-fatal inpatient hospitalizations due to injury among residents of Coconino County. Thirty-one percent of the hospitalizations were among individuals ages 25 to 44 years (n=166). Eighty percent of the hospitalizations were due to unintentional injuries (n=428); 8 percent were due to self-inflicted injuries (n=44); 10 percent were assaults (n=53); 1 percent were of undetermined intent (n=8); and 1 percent were due to legal intervention (n=4). The most common cause of unintentional injury-related hospitalizations was falls (32 percent, n=135).

There were 8,528 injury-related non-fatal emergency department visits among residents of Coconino County in 2005. The largest percentage of visits was among individuals ages 25 to 44 years (28 percent, n=2,425). Ninety-one percent of the emergency department visits were due to unintentional injuries (n=7,792); 6 percent were due to assaults (n=503); 2 percent were due to self-inflicted injuries (n=169); and 1 percent were of undetermined intent (n=43). There were 21 injury-related emergency department visits due to legal intervention. The most common cause of unintentional injury-related emergency department visits was falls (27 percent, n=2,131).

Source for deaths: 2005 Death Certificate Database

Source for hospitalizations: 2005 Inpatient Hospital Discharge Database

Source for emergency department visits: 2005 Outpatient Emergency Department Database

## Arizona Counties with Population, 2005

